IN THE CLAIMS

The following claim set replaces all prior versions, and listings, of claims in the application:

1. (canceled).

2. (currently amended) A heat transfer element according to claim ~~1, in~~ 23, wherein the heat transfer element has the form of a sheet.

3. (currently amended) A heat transfer element according to claim ~~1, in~~ 23, wherein the heat transfer element has the form of a tube.

4-9. (canceled).

10. (currently amended) A heat transfer element according to claim ~~1~~ 23, in which the glass fibres comprises continuous fibres.

11. (currently amended) A heat transfer element according to claim 10, in which the glass fibres comprise ~~rovings plaited to form~~ a reinforcing element selected from the group consisting of a continuous ~~tubes, formed into~~ tube comprising glass fibre rovings plaited one with another, a ~~tapes~~ tape formed from glass fibre rovings, or ~~woven into panels~~ a panel comprising glass fibre rovings interwoven one with another.

12. (original) A heat transfer element according to claim 11, in which the rovings are precoated with a plastics material.

13. (currently amended) A heat transfer element according to claim 11, in which the glass fibres comprise a reinforcing element in the shape of a continuous tube having an axis and comprising loosely commingled glass fibre rovings, wherein the individual glass fibre rovings each extend substantially in a plane that intersects the tube axis at an angle of about 10° to about 15° ~~to the tube axis~~.

14. (currently amended) A heat transfer element which comprises a polymer sheet having first and second outer surfaces and having a fibrous material interspersed therein and comprising a fluoropolymer ~~at least on an~~ on the first and second ~~outer surface~~ surfaces of the sheet, the fluoropolymer being selected from polyvinylidene fluoride and a copolymer of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, the interspersion of the fibrous material within the sheet providing rigidity to the element, and the fibrous material comprising from about 20% by volume to about 60% by volume, based upon the volume of the heat transfer element, of chemically resistant glass fibres distributed within the heat transfer element, the glass fibres acting as thermally conductive material.

15. (currently amended) A heat transfer element according to claim ~~1~~ 14, wherein an intermediate layer of a plastics material is provided underneath the ~~outer~~ first and second fluoropolymer ~~surface~~ surfaces of the element.

16. (original) A heat transfer element according to claim 15, wherein the plastics material comprises an acrylic polymer.

17. (currently amended) A heat transfer element according to ~~any one of claims 1 to 16~~ claim 14, wherein the fluoropolymer comprises ~~PVDF~~ polyvinylidene fluoride.

18. (canceled)

19. (canceled)

20. (original) A process for the production of a heat transfer element according to claim 1 comprising providing a fibrous base portion comprising glass fibres, and

forming by compression moulding or lamination over the surface of the base portion a coating comprising a fluoropolymer whereby the glass fibres comprise from about 20% by volume to about 60% by volume of the heat transfer element.

21. (original) A process according to claim 20, wherein the fibrous base portion further includes metal fibres

22. (new) A heat transfer element according to claim 2, wherein the sheet has a thickness of from about 0.2 mm to about 1.2 mm.

23. (new) A heat transfer element comprising first and second surface layers consisting essentially of polyvinylidene fluoride and an interior layer between the first and second surface layers, the interior layer comprising a polymer matrix having a fibrous material interspersed therein, the interspersion of the fibrous material within the polymer matrix providing rigidity to the heat transfer element, and the fibrous material comprising from about 20% by volume to about 60% by volume, based upon the total volume of the heat transfer element, of boron-free glass fibres, said boron-free glass fibres acting as thermally conductive material.

24. (new) A heat transfer element according to claim 23, wherein the polymer matrix comprises polyvinylidene fluoride.

25. (new) A heat transfer element according to claim 23, wherein the fibrous material further comprises metal fibres.

26. (new) A heat transfer element according to claim 23, wherein the polymer of the polymer matrix comprises an acrylic polymer.

27. (new) A heat transfer element according to claim 23, wherein the polymer of the polymer matrix comprises a mixture of polyvinylidene fluoride and an acrylic polymer.

28. (new) A heat transfer element according to claim 23, wherein the element is in the form of a sheet having a thickness of from about 0.2 mm to about 1.2 mm.

29. (new) A heat transfer element comprising:

first and second surface layers consisting essentially of a fluoropolymer selected from polyvinylidene fluoride and copolymers of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, and

an interior layer comprising a polymer matrix having interspersed therein a fibrous material comprising chemically resistant glass fibres in an amount corresponding to from about 20% to about 60% by volume, based upon the total volume of the heat transfer element, wherein said glass fibres provide rigidity to the heat transfer element and act as thermally conductive material for conducting heat from the first surface layer to the second surface layer.

30. (new) A heat transfer element according to claim 29, wherein the glass fibres are boron-free glass fibres.

31. (new) A heat transfer element according to claim 29, wherein the first and second surface layers consist essentially of polyvinylidene fluoride.

32. (new) A heat transfer element according to claim 29, wherein the polymer matrix comprises polyvinylidene fluoride.

33. (new) A heat transfer element according to claim 29, wherein the polymer of the polymer matrix comprises an acrylic polymer.

34. (new) A heat transfer element according to claim 29, wherein the polymer of the polymer matrix comprises a mixture of polyvinylidene fluoride and an acrylic polymer.

35. (new) A heat transfer element according to claim 29, wherein the element has the form of a sheet having a thickness of from about 0.2 mm to about 1.2 mm.

36. (new) A heat transfer element in the form of a sheet which is from about 0.4 mm to about 1.2 mm thick, said sheet comprising:

first and second surface layers consisting essentially of a fluoropolymer selected from polyvinylidene fluoride and copolymers of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride; and

an interior layer between the first and second surface layers, the interior layer comprising a polymer matrix having interspersed therein a fibrous material comprising chemically resistant glass fibres in an amount corresponding to from about 20% to about 60% by volume, based upon the total volume of the heat transfer element, wherein said glass fibres provide rigidity to the heat transfer element and act as thermally conductive material for conducting heat from the first surface layer to the second surface layer.

37. (new) A heat transfer element according to claim 36, wherein the glass fibres are boron-free glass fibres.

38. (new) A heat transfer element according to claim 36, wherein the first and second surface layers consist essentially of polyvinylidene fluoride.

39. (new) A heat transfer element according to claim 36, wherein the polymer matrix comprises polyvinylidene fluoride.

40. (new) A heat transfer element according to claim 36, wherein the polymer of the polymer matrix comprises an acrylic polymer.

41. (new) A heat transfer element according to claim 36, wherein the polymer of the polymer matrix comprises a mixture of polyvinylidene fluoride and an acrylic polymer.

42. (new) A heat transfer element in the form of a sheet which is from about 0.4 mm to about 1.2 mm thick, said sheet comprising:

first and second surface layers consisting essentially of a fluoropolymer selected from polyvinylidene fluoride and copolymers of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride; and

an interior layer between the first and second surface layers, the interior layer comprising a polymer matrix having interspersed therein a fibrous material comprising boron-free glass fibres in an amount corresponding to from about 20% to about 60% by volume, based upon the total volume of the heat transfer element, wherein said glass fibres provide rigidity to the heat transfer element and act as thermally conductive material for conducting heat from the first surface layer to the second surface layer.

43. (new) A tubular heat transfer element having an axis and comprising layers of tape laminated one to another, the tape comprising rovings of chemically resistant glass fibre impregnated with a fluoropolymer selected from polyvinylidene fluoride and a copolymer of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, the direction of the rovings in at least one layer

of tape extending substantially axially of the tubular heat transfer element and the direction of the rovings in the other layers extending in at least one plane which intersects the axis at an angle of from about 0° to about 20°.

44. (new) A heat transfer element comprising:

first and second surface layers consisting essentially of a first polymer selected from (a) polyvinylidene fluoride, (b) a copolymer of at least 80% by weight of vinylidene fluoride, based upon the weight of the copolymer, with up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer chosen from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, (c) a mixture of polyvinylidene fluoride and an acrylic polymer, and (d) a mixture of said copolymer and an acrylic polymer; and

an interior layer between the first and second surface layers, the interior layer comprising a matrix of said first polymer having a fibrous material interspersed therein, the interspersion of the fibrous material within the first polymer matrix providing rigidity to the heat transfer element, and the fibrous material comprising from about 20% by volume to about 60% by volume, based upon the total volume of the heat transfer element, of boron-free glass fibres, said boron-free glass fibres acting as thermally conductive material.

45. (new) A heat transfer element according to claim 44, wherein the heat transfer element has the form of a sheet having a thickness of from about 0.4 mm to about 1.2 mm.

46. (new) A heat transfer element in the form of a sheet having a thickness of from about 0.4 mm to about 1.2 mm. comprising:

first and second surface layers consisting essentially of polyvinylidene fluoride; and

an interior layer between the first and second surface layers, the interior layer comprising a matrix of a polymer having a fibrous material interspersed therein, the polymer being selected from

(a) polyvinylidene fluoride,

(b) a copolymer of at least 80% by weight of vinylidene fluoride, based upon the weight of the copolymer, with up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer chosen from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride,

(c) a mixture of polyvinylidene fluoride and an acrylic polymer, and

(d) a mixture of said copolymer and an acrylic polymer,

the interspersion of the fibrous material within the first polymer matrix providing rigidity to the heat transfer element, and the fibrous material comprising from about 20% by volume to about 60% by volume, based upon the total volume of the heat transfer element, of boron-free glass fibres, said boron-free glass fibres acting as thermally conductive material.

47. (new) A heat transfer element according to claim 46, wherein the heat transfer element has the form of a sheet having a thickness of from about 0.4 mm to about 1.2 mm.

48. (new) A heat transfer element which comprises a polymer sheet having first and second outer surfaces and having interspersed therein from about 20% to about 60% by volume, based upon the volume of the heat transfer element, of boron-free glass fibres and from 0% to about 25% by volume, based upon the volume of the heat transfer element, of comminuted metal in a form selected from metal powder and metal fibres, the heat transfer element comprising a fluoropolymer on the first and second

surfaces of the sheet selected from polyvinylidene fluoride and a copolymer of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride.

49. (new) A heat transfer element according to claim 48, wherein the metal is selected from iron, steel, and stainless steel.

50. (new) A heat transfer element in the form of a sheet having a thickness of from about 0.4 mm to about 1.2 mm comprising first and second surface layers consisting essentially of polyvinylidene fluoride and an interior layer between the first and second surface layers, the interior layer comprising a polymer matrix having interspersed therein from about 20% by volume to about 60% by volume, based upon the total volume of the heat transfer element, of boron-free glass fibres and from 0% to about 25% by volume, based upon the volume of the heat transfer element, of comminuted metal in a form selected from metal powder and metal fibres.

51. (new) A tubular heat transfer element having an axis and comprising layers of tape laminated one to another, the tape comprising rovings of boron-free glass fibre impregnated with a fluoropolymer selected from polyvinylidene fluoride and a copolymer of at least 80% by weight, based upon the weight of the copolymer, of vinylidene fluoride and up to 20% by weight, based upon the weight of the copolymer, of at least one other fluorine based monomer selected from tetrafluoroethylene, hexafluoropropylene and vinyl fluoride, the direction of the rovings in at least one layer of tape extending substantially axially of the tubular heat transfer element and the direction of the rovings in the other layers extending in at least one plane which intersects the axis at an angle of from about 0 to about 20 degrees, and the body of the heat transfer element having dispersed therein from 0% to about 25% by volume, based

upon the volume of the heat transfer element, of comminuted metal in a form selected from metal powder and metal fibres.

52. (new) A heat transfer element according to claim 52, wherein the metal is selected from iron, steel, and stainless steel.